

REGULATION III - CONTROL OF AIR CONTAMINANTS

RULE 340 CUTBACK AND EMULSIFIED ASPHALT

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**MARICOPA COUNTY
AIR POLLUTION CONTROL REGULATIONS**

REGULATION III - CONTROL OF AIR CONTAMINANTS

**RULE 340
CUTBACK AND EMULSIFIED ASPHALT**

SECTION 100 - GENERAL

- 101 PURPOSE:** To limit emissions of volatile organic compounds (VOCs) from the use of cutback and emulsified asphalt and other bitumens.
- 102 APPLICABILITY:** The provisions of this rule apply to the use and application of cutback and emulsified asphalt or tar materials for the paving, construction or maintenance of highways, streets, roads, parking lots, and driveways, and to the application of such materials onto soil and earthworks.

SECTION 200 - DEFINITIONS: For the purpose of this rule, the following definitions shall apply:

- 201 ASPHALT CEMENT** - The dark brown to black cementitious material (solid, semi-solid, or liquid in consistency), of which the main constituents are naturally occurring bitumens or bitumens resulting from petroleum refining.
- 202 ASPHALT RUBBER** - An asphaltic binder made with asphalt cement and at least three percent of ground tire rubber by weight.
- 203 BITUMEN** - A class of black or dark-colored (solid, semi-solid or viscous) cementitious substances, natural or manufactured, composed principally of high molecular weight hydrocarbons, of which asphalts, tars, pitches and asphaltites are typical.
- 204 CUTBACK ASPHALT** - An asphalt cement liquified with any solvent-VOC.
- 205 CUTBACK TAR** - A tar liquified with any solvent-VOC.
- 206 DUST PALLIATIVE** - A light application of cutback or emulsified asphalt for controlling loose dust.

- 207 EMULSIFIED ASPHALT/EMULSIFIED TAR** - Any liquified asphalt or tar produced by dispersing asphalt cement or tar into water by means of high speed agitation and an emulsifying agent.
- 208 MEDIUM CURE CUTBACK ASPHALT** - A cutback asphalt which meets ASTM specification D 2027.
- 209 PENETRATING PRIME COAT** - The low viscosity liquid asphalt or tar applied to a relatively absorbent surface to prepare it for new superimposed construction. Prime coats do not include dust palliatives or tack coats.
- 210 RAPID CURE CUTBACK ASPHALT** - A cutback asphalt which falls generally within the specifications of ASTM designation D 2028-76 and which generally cures more quickly than medium cure cutback asphalt.
- 211 SOLVENT-VOC** - For the purposes of this rule, any volatile organic compound which is used with an asphalt or tar to give fluidity and other desired properties and which volatilizes at 500°F (260°C) or less.
- 212 TACK COAT** - An application of liquified asphalt to an existing, relatively nonabsorbent surface to provide a thorough bond between that surface and the superimposed layer.
- 213 TAR** - For the purposes of this rule, any non-asphalt bitumen. This includes road tar produced by distilling coal tar or blending coal-tar pitch with lighter coal-tar fractions.
- 214 VOLATILE ORGANIC COMPOUND (VOC)** - Any organic compound, excluding the following organic compounds which have been designated by the EPA as having negligible photochemical reactivity: methane; ethane; methylene chloride (dichloromethane); 1,1,1-trichloroethane; trichlorofluoromethane (CFC-11); dichlorodifluoromethane (CFC-12); chlorodifluoromethane (CFC-22); 1,1,2-trichlorotrifluoroethane (CFC-113); 1,2-dichlorotetrafluoroethane (CFC-114); chloropentafluoroethane (CFC-115); trifluoromethane (FC-23); 2,2-dichloro-1,1,1-trifluoroethane (HCFC-123); 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124); 1,1-dichloro-1-fluoroethane (HCFC-141b); 1-chloro-1,1-difluoroethane (HCFC-142b); pentafluoroethane (HFC-125); 1,1,2,2-tetrafluoroethane (HFC-134); 1,1,1,2-tetrafluoroethane (HFC-134a); 1,1,1-trifluoroethane (HFC-143a); 1,1-difluoroethane (HFC-152a); all completely fluorinated, completely saturated: alkanes, ethers and tertiary amines.

Note¹

SECTION 300 - STANDARDS

¹ This note is not part of Rule 340, but is provided as a convenience to the reader. The current list of exempted organic compounds is in Rule 100, Section 200, in the definition of Non-Precursor Organic Compound.

301 LIMITATIONS: No person shall sell, offer for sale, use or apply the following materials for paving, construction, or maintenance of highways, streets, driveways, parking lots or for any other use to which this rule applies:

301.1 Rapid cure cutback asphalt.

301.2 Any cutback asphalt material, road oils, or tar which contains more than 0.5 percent by volume VOCs which evaporate at 500°F (260°C) or less using ASTM Test Method D 402-76.

301.3 Any emulsified asphalt or emulsified tar containing more than 3.0 percent by volume VOCs which evaporate at 500°F (260°C) or less as determined by ASTM Method D 244-89.

302 EXEMPTIONS: The provisions of this rule shall not apply to:

302.1 Asphalt that is used solely as a penetrating prime coat and which is not a rapid cure cutback asphalt. Penetrating prime coats do not include dust palliatives or tack coats.

302.2 Any asphalt/bituminous material sold in Maricopa County for shipment and use outside Maricopa County if the person claiming such exemption clearly labels each container of materials entitled to such exemption or upon request (during normal business hours) immediately provides the Control Officer with shipping records demonstrating the asphalt material is not for use within Maricopa County.

302.3 A person may use up to 3.0 percent solvent-VOC by volume for batches of asphalt rubber which cannot meet paving specifications by adding heat alone only if request is made to the Control Officer, who shall evaluate such requests on a case-by-case basis. The Control Officer shall not approve such requests unless complete records are kept and full information is supplied including savings realized by using discarded tires. The Control Officer shall not approve such requests when it would cause a person to exceed 1100 lbs (500 kg) usage of solvent-VOC in asphalt rubber in a calendar year unless the applicant can demonstrate that in the previous 12 months no solvent-VOC has been added to at least 95 percent by weight of all the asphalt rubber binder made by the person or caused to be made for the person. This subsection (302.3) does not apply to batches which yield 0.5 percent or less solvent-VOC evaporated using the test in subsection 502.1.

303 LABELING REQUIREMENT: On or after December 22, 1992, no person shall sell, offer for sale, manufacture or store for sale or for use within Maricopa County any emulsified or cutback asphalt product which contains more than 0.5 percent by volume

solvent-VOC unless such material lot includes a designation of solvent-VOC content on data sheet(s) expressed in percent solvent-VOC by volume.

SECTION 500 - MONITORING AND RECORDS

501 RECORDKEEPING AND REPORTING: The owner or operator of any facility subject to this rule which manufactures, mixes, stores, ships, uses or applies any asphaltic/bituminous material containing more than 0.5 percent by volume solvent-VOC shall keep daily records of the amount and type received, used and shipped, as well as the solvent-VOC content of this material. Safety data (MSDS) or technical data sheets shall be kept available. These records must be maintained in a readily accessible location for a minimum of three years and must be made available to the Control Officer upon verbal or written request.

502 COMPLIANCE DETERMINATION - TEST METHODS:

502.1 Solvent-VOC content of non-emulsified asphalts and tars shall be determined by American Society for Testing and Materials (ASTM) Method D 402-76. For the purposes of this rule, the end point of the distillation shall be at 500°F (260°C).

502.2 Solvent-VOC content of emulsified asphalts and tars shall be determined using ASTM Method D 244-89. The end point of the distillation shall be at 500°F (260°C).

502.3 Measurement of exempt compound content in cutback and emulsified asphalts shall be conducted and reported in accordance with ASTM Test Method D 4457-85.

502.4 Tests to assist in determining the solvent-VOC content of the asphaltic binder of an asphaltic concrete are: ASTM Method D 2172 "Test For Quantitative Extraction of Bitumen From Bituminous Paving Mixtures" and ASTM Method D 1856 "Test for Recovery of Asphalt from Solution by Abson Method."